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EXAMINER

VAN, QUANG T

ART UNIT PAPER NUMBER

3742

DATE MAILED: 09/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/048,206

Applicant(s)

HUGHES, RUSSELL VERNON

Examiner

Quang T Van

Art Unit

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 49-81 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 49-54 and 59-81 is/are rejected.
- 7) ☒ Claim(s) 55-58 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 29 November 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Drawings***

1. This application has been filed with informal drawings, which are acceptable for examination purposes only. Formal drawings are required in reply to this Office Action.

***Specification***

2. The abstract of the disclosure is objected to because the legal phraseology such as "means" or "comprising" often used in patent claims should be avoided in the abstract. Correction is required. See MPEP § 608.01(b).

***Claim Objections***

3. Claim 67 is objected to because of the following informalities: "distrubuter" recited in line 3 has a typo error and should be changed to "disturber". Correction is required.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 49-50, 52-53, 59-67, 69-73, and 81 are rejected under 35 U.S.C. 102(e) as being anticipated by Takeda et al (JP11347742A). Takeda discloses superposed arc welding method for aluminum work comprising the step of melting said members

(1,2) at a predetermined location to form a weld pool (7); and disturbing the weld pool by introducing a disturbing member (5) into the weld pool (figure E).

6. Claims 67, 69-73 and 81 are rejected under 35 U.S.C. 102(b) as being anticipated by DE3535212 cited by applicant. DE3535212 discloses, figures 1-3, a plasma welding torch with a device for feeding filler comprising a plasma arc torch (D) operable to form a weld pool in a work piece (WO), and a weld pool disturber including a disturbing member (Z) which is movable into the weld pool to a depth sufficient to penetrate the overlapping oxide layers (W20, W10) present in the weld pool.

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 68, 75-77 and 80 are rejected under 35 U.S.C. 103(a) as being unpatentable over DE3535212 in view of JP 58123622 both cited by applicant. DE3535212 discloses substantially all features of the claimed invention except a weld pool supporting member. JP 58123622 discloses a weld pool supporting member (5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in DE3535212 a weld pool supporting member as taught by JP 58123622 in order to support the welding materials.

9. Claim 79 is rejected under 35 U.S.C. 103(a) as being unpatentable over DE3535212 in view of JP 59212169 both cited by applicant. DE3535212 discloses

substantially all features of the claimed invention except the support member has a peripheral raised edge against which the work piece is received. JP59212169 discloses a support member (2) has a peripheral raised edge against which the work piece (1, 1') is received. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in DE3535212 a support member has a peripheral raised edge against which the work piece is received as taught by JP59212169 in order to reduce the transfer of heat from the work piece to the support member during welding.

10. Claim 78 is rejected under 35 U.S.C. 103(a) as being unpatentable over DE3535212 in view of Umeno et al (US 5,449,107) both cited by applicant. DE3535212 discloses substantially all features of the claimed invention except the supporting member is providing with a cooling system. Umeno discloses a supporting member (11) is providing with a cooling system (12). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in DE3535212 a supporting member is providing with a cooling system as taught by Umeno in order to reduce the temperature of the support member during welding.

11. Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda et al (JP11347742A) in view of Kelly (US 6,489,584). Takeda discloses substantially all features of the claimed invention except the disturbing member is non-consumable. Kelly discloses a disturbing member (72) is non-consumable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to

utilize in Takeda a disturbing member is non-consumable as taught by Kelly in order to withstand from the heat of the weld pool.

12. Claim 74 is rejected under 35 U.S.C. 103(a) as being unpatentable over DE3535212 in view of Kelly (US 6,489,584). DE3535212 discloses substantially all features of the claimed invention except the disturbing member is non-consumable. Kelly discloses a disturbing member (72) is non-consumable. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in DE3535212 a disturbing member is non-consumable as taught by Kelly in order to withstand from the heat of the weld pool.

13. Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takeda et al (JP11347742A) in view of Takada et al (US 5,728,991). Takeda discloses substantially all features of the claimed invention except the step of clamping the workpieces prior to form the welding pool. Takada discloses the step of clamping the workpieces (e, g) prior to form the welding pool (col. 1, lines 19-34). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize in Takeda the step of clamping the workpieces prior to form the welding pool as taught by Takada in order to securely fixed the workpieces to the support member before welding.

14. Claims 55-58 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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15. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not show or suggest the step of disturbing the welding pool comprises the steps of advancing the disturbing member into the weld pool at a speed of advance and to a predetermined depth, and then withdrawing the disturbing member at a speed of withdrawal as recited in claim 55.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quang T Van whose telephone number is 703-306-9162. The examiner can normally be reached on 8:00Am 7:00Pm M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sang Paik can be reached on 703-308-1147. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0861.



QV  
September 17, 2003



Quang T Van  
Primary Examiner  
Art Unit 3742